**MOI tool notes**

**To do**

* The CSV file is a “SYLK” file and cannot be opened in Excel. Workaround: Export attribute table to e.g. txt, then open in Excel.
* Shape ID for GeoLines corresponds OK to ORIG\_FID in point3D, but ID in GeoPoint is Shape ID - 1, except for the first Geopoint, which has the ID of the maximum Shape ID. I’m not sure if this is a general problem yet. It looks like it isn’t. Workaround: Don’t delete records – edit the GeoLines shapes instead.
* How can I reset the GeoLines Shape ID to 1, 2, ... ? Usually no need – start again with the default files.
* MOI fit image is replaced with each run of MOI\_V2, but the Windows photo viewer does not discard the older ones, which accumulate in the Windows taskbar.
* Can MOI\_V2 be run without a confirmation box displaying “This tool has no parameters” coming up?
* Add Quality field to GeoPoint and GeoLines:

If K>(-0.1\*M+1.2) Then Q=0.8/K Else Q=M/4

Use RMSE instead? Answer: No.

* Change symbology of Geopoint and GeoLines to colour by Quality (or RMSE) and points3D to colour by Error. Changing 3D\_points.lyr and GeoPoint .lyr files doesn’t seem to change the symbology of points3D and GeoPoint when MOI\_V2 is run.

**Tips and tricks**

* You’ll need either the Spatial Analyst or 3D Analyst extension (via Customise – Extensions ...)
* Don’t try to digitise a line comprising just 2 points – you’ll get an error.
* Just before running MOI\_V2, delete the M-K graph (otherwise they build up in the taskbar).
* Points with high M and low K (i.e. the best Geolines) plot off the graph.

**Handy procedures**

* **Replace MOI\_scratch.gdb INPUT\_DEM with desired DEM**

Rename INPUT\_DEM to INPUT\_DEM\_testdata

Open Arc Catalog. Right click on MOI\_scratch.gdb and select Import – Raster datasets

Change name to INPUT\_DEM

Add the DEM to the project.

This is also a good place to put all the imagery you’ll use.

* **Manually create GeoPoint layer coloured by K-M Quality**

*<1 is bad (blue), >1 is good (red)*

Copy GeoPoint

Paste as new layer (the old layer gets deleted every time you run MOI)

Rename to GeoPoint pt

Open Attribute table

Add Field: Quality, double

Right click on Quality field header and select Field calculator

Tick Show code block

Paste into Pre-logic script code:

If [K] > (-0.1 \* [M] + 1.2) Then

Q = 0.8 / [K]

Else

Q = [M] / 4

End If

Add Quality = Q

Edit symbology – Import GeoPoint pt.lyr (<1 blue, 1 yellow-green, >1 red)